

Samples of Student Thinking for Math CAMPPP 2011

Please insert your requests for samples of student thinking for plenary sessions. We'll add breakout requests as those teams form up.

Question	Context for posing this question e.g., Grade; beginning/middle/end of a unit of study	Mode of collection e.g., written, video, audio, Senteo, recording of IWB, blog	Who might be willing and able to gather such samples
<p>How might you fill in the blanks? ___ is more than twice as much as ____</p> <p>How might you fill in the blanks? _____ is more than double _____</p>	<p>Grade 1 and 2</p> <p>Grade 3 and 4</p>	<p>Video capture + collect student written work. Video through Voice Thread</p>	<p>Danielle Blair (SCDSB) Michele McGuire (SCDSB)</p> <p>Anna Jupp (TDSB) Jenn Paziuk (HDSB) Kerry Dwyer Mitchell (HWCD SB) Marie Swift (SCDSB)</p>
<p>Provide 2 dimes, 4 nickels, and 3 pennies, but scatter and mix them up.</p> <p>How would you count the coins to see how much money there is?</p>	<p>Grade 2, 3 and 4</p>	<p>Video capture.</p>	<p>Sharman Howes (Peel DSB) Anna Jupp (TDSB) Jenn Paziuk (HDSB) Kerry Dwyer Mitchell (HWCD SB) Marie Swift (SCDSB) Michele McGuire (SCDSB)</p>

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<p>Which is closer to $\frac{1}{2}$:</p> <p>$\frac{3}{8}$ or $\frac{4}{10}$?</p> <p>How do you know?</p>	Grade 4,5, and 6	<p>Written work</p> <p>- possible to use Senteo – before and at end of discussion.</p>	<p>Paul Costa (UGDSB)</p> <p>Marci Duncan (SCDSB) – written</p> <p>Danielle Blair (SCDSB) – video</p> <p>Kerry Dwyer Mitchell (HWCDSB)</p> <p>Tracey Williams (SCDSB)</p> <p>Michele McGuire (SCDSB)</p>
<p>You have more than 20 markers. When you give them out in groups of 3, there is exactly one marker leftover. How many markers could there be?</p>	Grade 3, 4, and 5.	<p>Video capture + student work collected</p>	<p>Sharman Howes (Peel DSB)</p> <p>Jenn Paziuk (HDSB)</p> <p>Jan Crofoot (Peel DSB)</p> <p>KKerry Dwyer Mitchell (HWCDSB)</p> <p>Tracey Williams (SCDSB)</p> <p>Michele McGuire (SCDSB)</p>
<p>4 boxes of cookies cost \$10. How much should 18 boxes cost?</p>	Grade 6, 7 and 8	<p>Written work</p>	<p>Marci Duncan (SCDSB)</p> <p>Kerry Dwyer Mitchell (HWCDSB)</p> <p>Cheryl McGinnis (SCDSB)</p> <p>Krishna Takman (HDSB)</p> <p>Sharman Howes (Peel DSB)</p>
<p>A fraction is just a bit more than $\frac{2}{3}$. What might it be?</p>	Grade 5, 6 and 7	<p>Video capture</p>	<p>Michele McGuire (SCDSB)</p> <p>Marci Duncan (SCDSB)</p> <p>Danielle Blair (SCDSB)</p> <p>Cheryl McGinnis (SCDSB)</p> <p>Kerry Dwyer Mitchell (HWCDSB)</p> <p>Sharman Howes (Peel DSB)</p> <p>Krishna Takman (HDSB)</p>

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<p>Jacob says that every multiple of 6 is a multiple of 3, but that not every multiple of 3 is a multiple of 6.</p> <p>What do you think? Why?</p>	Grade 5 and 6	Written work	<p>Marci Duncan (SCDSB) Kerry Dwyer Mitchell (HWCDSB) Michele McGuire (SCDSB)</p>
<p>Cookie recipe given for 6 dozen cookies - see below</p> <p>How much of each ingredient do you need for 15 dozen cookies? Draw pictures to show how you would represent the amounts you need.</p>	Grade 6, 7 and 8	IWB recorded and/or written work	<p>Paul Costa (UGDSB) Kerry Dwyer Mitchell (HWCDSB) Marci Duncan (SCDSB) Cheryl McGinnis (SCDSB) Lisa Pilgrim (HDSB) Luc Bertran (BHNCDSB)</p>
<p>A number called A is 20% of a number called B. But A is 40% of C. What do you now about B and C?</p>	Grade 7, 8 and 9	Video capture.	<p>Krishna Takman (HDSB) Lisa Pilgrim (HDSB) Kerry Dwyer Mitchell (HWCDSB) EJ Hunt (BHNCDSB)</p>

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You know that the number A is 40% of B. How would you find the number that is 35% of B?	Grade 7, 8 and 9	Video capture	Lisa Pilgrim (HDSB) Krishna Takman (HDSB) Kerry Dwyer Mitchell (HWCDSB)
A lion's heart beats 40 beats in 60 seconds. How long would it take to beat 1 million times?	Grade 7, 8 and 9	Written work	Krishna Takman (HDSB) Paul Costa (UGDSB)
A salesman gets \$75/hr + 3% commission on his sales. If he doubles his sales, does he double his commission? Explain.	Grade 9 and 10	IWB recorded and/or possible blog question Video capture	Paul Costa (UGDSB) EJ Hunt (BHNCD SB)
An arithmetic sequence grows really quickly. The tenth term is 8. What could the sequence formula be?	Grade 11 and 12	Video capture Possible blog question	Paul Costa (UGDSB)
If it takes 4 men 6 hours to repair a road, how long will it take 9 men to do the job if they work at the same	Grade 10, 11, and 12	Written work	Paul Costa (UGDSB)

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<p>If it takes 4 men 6 hours to repair a road, how long will it take 9 men to do the job if they work at the same rate?</p>	<p>Grade 10, 11, and 12</p>	<p>Written work</p>	<p>Paul Costa (UGDSB)</p>
<p>Provide graph: see below Someone says that the graph on the next slide describes someone going up a hill. Why might he be right? Why might he be wrong?</p>	<p>Grade 9 and 10</p>	<p>Video capture</p>	<p>Paul Costa (UGDSB) EJ Hunt (BHNCD SB)</p>
<p>Graph a number of lines of the form $y = mx + m$ What do you notice?</p>	<p>Grade 9 and 10</p>	<p>IWB recorded Written work and/or video capture</p>	<p>Paul Costa (UGDSB) EJ Hunt (BHNCD SB)</p>

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Unknown grades so far:

Kathy Pilon (CDSBEO)

Scott Podrebarac (WDSB) - primary

Vince Campolongo (Wellington Catholic DSB)

Cheryl McQueen (TVDSB)

Todd Malarczuk (HDSB)

Collection of Gap Closing student responses:

Grade 6 and Grade 9

Cookie Recipe - Ingredients for 6 Dozen Cookies

$\frac{3}{4}$ cup butter

$\frac{1}{2}$ cup sugar

2 eggs

$\frac{1}{2}$ cup cream

1 tsp vanilla

1 cup flour

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3 cups oatmeal
2 tsp baking powder
1 tsp salt
1 tsp cinnamon
1 cup chocolate chips

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